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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,357	01/23/2004	Tomohisa Konno	248100US0DIV	4862

22850 7590 07/02/2004

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EXAMINER

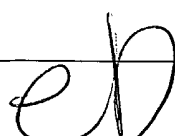
ZALUKAEVA, TATYANA

ART UNIT PAPER NUMBER

1713

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/762,357	KONNO ET AL.	
	Examiner	Art Unit	
	Tatyana Zalukaeva	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/842,162.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>01/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3, 5, 7 are rejected under 35 U.S.C. 102(a/e) as anticipated by Ito et al (U.S. 6,210,869).

Ito discloses a binder, which is a crosslinked rubber particle comprising the following comonomer units:

styrene/butadiene/hydroxyethylmethacrylate/divinylbenzene=67/30/2.5/0.5 (% by weight). This is a specific example with all the monomers of the instant claims 1, 3, 5, 7

and ranges as a specific data point within the claimed ranges (col.115, lines 18-25).

Particle sizes recited by Ito are between 0.05 and 10 micron (0.05 micron is 50 nanometers). The amount of toluene insoluble is expected to be inherent since the composition of Ito is identical to the composition as instantly claimed, and the comonomers of Ito are identical and are present in identical amounts, as those instantly claimed.

6. Claims 1,3,5,7 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hashimoto et al (U.S. 6,316,172) Styrene/Butadiene/Hydroxyethylmethacrylate/ Divinylbenzene = 67/30/2.5/0.5 (wt. %) (col.21, lines 39-46).

With regard to the properties are not taught by Hashimoto the rejection is made in the sense of The above rejections were made in the sense of In re Fitzgerald or *In re Spada*, 911 F 2d 705, 709 15 USPQ 1655, 1658 (Fed. Cir. 1990), which settles that when the claimed compositions are not novel, they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in prior art.

7. Claims 1, 2 3, 4, 6 and 8 are rejected under 35 U.S.C. under 35 U.S.C. 103(a) as obvious over Takashima et al (U.S. 6,458,883) in view of Yamada et al (U.S. 4,368,237).

Takashima discloses conductive rubber composition that contains a particulate polymer (A1), **crosslinked particulate polymer**, and the like, an **uncrosslinked polymer** (A2), and a conductivity imparting agent (B) (abstract).

Specific Example 1 in col. 12 provides for particularities of a composition, The crosslinked particulate polymer (A1-1) of this example was manufactured by the emulsion polymerization of a butadiene-styrene-divinylbenzene monomer mixture of a ratio of 70/20/10 (mol %) using sodium lauryl sulfate as an emulsifying agent and benzoyl peroxide as a polymerization initiator. The resulting copolymer emulsion was salified using calcium chloride, and dried to obtain a crosslinked particulate polymer (A1, solubility parameter value (hereinafter, referred to as "SP value"; 8.45). The polymerization conversion ratio at this step was found to be roughly 100%.

The average particle diameter of the crosslinked particulate polymer (A1-1) was 0.7 μm , and the Mooney viscosity was 75 (100.degree. C.). The result of the toluene-insoluble part is shown in table 2. As for generically used monomers to afford the crosslinking rubber (A1), which has toluene insolubles 80% or more, preferably 90% or more (col. 3, lines 64-67),

Takashima does not disclose the presence of a monomer (d) as claimed in the instant claims 1, 2, 3, 4, 6 and 8.

However, Takashima discloses the presence of another polymer particle that comprises a copolymer containing the comonomers as instantly claimed.

Such, Takashima exemplifies monomers (1), listed in col. 4, lines 16-44 and monomers (2), listed in col. 4, lines 45-53, such monomers include ethylene glycol di(meth)acrylate, propylene glycol-di(meth)acrylate, 1,4-butanediol-di(meth)acrylate, 1,6-hexanediol-di(meth)acrylate, trimethylolpropane di(meth)acrylate, trimethylolpropane-tri(meth)acrylate, pentaerithritol-tri(meth)acrylate, pentaerithritol-

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tetra(meth)acrylate, divinylbenzene, diisopropenylbenzene, trivinylbenzene, and hexamethylene-di(meth)acrylate. These monomers 2 can be used alone, or in mixtures of two or more thereof.

Yamada discloses copolymer components , for example, styrene/butadiene/glycidyl acrylate, styrene/butadiene/glycidyl methacrylate, styrene/butadiene/allyl glycidyl ether, styrene/butadiene/vinyl glycidyl ether, styrene/isoprene/glycidyl acrylate, styrene/isoprene/glycidyl methacrylate (col.8, lines 35-47). Taking into consideration the language of the instant claim 1, wherein the component © can be the same as component (a), those skilled in the art would have found obvious to utilize the components of Yamada as initial components of the comonomer mixture in a crosslinked particle to impart this particle desired properties with the reasonable expectation of success.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following U.S. Patents show the state of the art in the field of rubber compositions related to those as instantly claimed: U.S. 6,344,518; U.S. 4,365,042; U.S. 4,835,216; U.S. 6,191,234; U.S. 4,625,005; U.S. 4,675,362; U.S. 4,804,028; U.S. 5,219,938; U.S. 5,432,232; U.S. 5,047,483.

9. Applicants are reminded to update the continuity data.

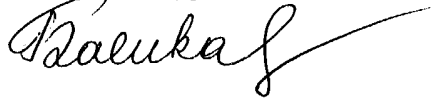
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (571) 272-1115. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 28, 2004

Tatyana Zalukaeva
Primary Examiner
Art Unit 1713

A handwritten signature in cursive script, appearing to read 'Zalukaeva', with a long horizontal flourish extending to the right.